

What is claimed is:

1. A capacitance sensor having specified directionality, said capacitance sensor comprising:

5 detection electrodes;
an insulating material insulating said detection electrodes from each other;
a main body containing said detection electrodes and said insulating material and
having a detection surface defined by said directionality; and
a water-repellant finish over at least a portion of said main body including said
10 detection surface.

2. The capacitance sensor of claim 1 further comprising:

a shield electrode inside said main body, said shield electrode being open toward
said detection surface, said detection electrodes being disposed inside said shield
15 electrode; and
a protective cover covering said shield electrode and said detection electrodes.

3. A capacitance sensor having specified directionality, said capacitance sensor comprising:

20 detection electrodes;
an insulating material insulating said detection electrodes from each other; and
a main body containing said detection electrodes and said insulating material and
having a detection surface defined by said directionality, said detection surface having
unevenness.

4. The capacitance sensor of claim 3 further comprising:

a shield electrode inside said main body, said shield electrode being open toward
said detection surface, said detection electrodes being disposed inside said shield
electrode; and
30 a protective cover covering said shield electrode and said detection electrodes.

5. A detector for detecting an object being caught by a door, said detector comprising:

detection electrodes;

an insulating material insulating said detection electrodes from each other;

5 a main body provided on an open end part of said door, said main body containing said detection electrodes and said insulating material;

a sensor circuit which, together with said sensor main body, forms a capacitance sensor having specified directionality;

10 wherein said sensor main body includes a detection surface defined by said directionality and a water-repellant finish is provided over at least a portion of said sensor main body including said detection surface.

6. The detector of claim 5 further comprising:

15 a shield electrode inside said main body, said shield electrode being open toward said detection surface, said detection electrodes being disposed inside said shield electrode; and

a protective cover covering said shield electrode and said detection electrodes.

20 7. A detector for detecting an object being caught by a door, said detector comprising:

detection electrodes;

an insulating material insulating said detection electrodes from each other;

a main body provided on an open end part of said door, said main body containing said detection electrodes and said insulating material; and

25 a sensor circuit which, together with said sensor main body, forms a capacitance sensor having specified directionality;

wherein said sensor main body includes an uneven detection surface defined by said directionality.

30 8. The detector of claim 7 further comprising:

a shield electrode inside said main body, said shield electrode being open toward said detection surface, said detection electrodes being disposed inside said shield electrode; and

a protective cover covering said shield electrode and said detection electrodes.

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9. A detector for detecting an object being caught by a door, said detector comprising:

detection electrodes;

an insulating material insulating said detection electrodes from each other;

10 a main body provided on an open end part of said door, said main body containing said detection electrodes and said insulating material;

a sensor circuit which, together with said sensor main body, forms a capacitance sensor having specified directionality; and

means for grounding said door;

15 wherein said sensor main body includes a detection surface defined by said directionality and said detector further comprised means for grounding said door.

10. The detector of claim 9 further comprising:

20 a shield electrode inside said main body, said shield electrode being open toward said detection surface, said detection electrodes being disposed inside said shield electrode; and

a protective cover covering said shield electrode and said detection electrodes.

25 11. A detector for detecting an object being caught by a door, said detector comprising:

detection electrodes;

an insulating material insulating said detection electrodes from each other;

a main body provided on an open end part of said door, said main body containing said detection electrodes and said insulating material;

30 a sensor circuit which, together with said sensor main body, forms a capacitance sensor having specified directionality;

wherein said sensor main body includes a detection surface defined by said directionality, said detection surface being at a position farther protruding from an open end part of said door.

- 5 12. The detector of claim 11 further comprising:
 a shield electrode inside said main body, said shield electrode being open toward
 said detection surface, said detection electrodes being disposed inside said shield
 electrode; and
 a protective cover covering said shield electrode and said detection electrodes.

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